

## SEQUENCE LISTING

<110> Shorrosh, Basil S.  
DeBonte, Lorin R.

<120> PLANTS CONTAINING A CYTOSOLIC ACETYL  
COA-CARBOXYLASE

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<151> 2000-04-20

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48

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96

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Ala Ser Phe Pro Val Ser Arg Lys Gln Asn Leu Asp Ile Thr Ser Ile	
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245						250					255					
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Val	Pro	Gly	Ser	Pro	Ile	Phe	Ile	Met	Lys	Val	Ala	Ser	Gln	Ser	Arg	
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Ile	Ala	Glu	Ile	Asn	Leu	Pro	Ala	Ala	Gln	Val	Ala	Val	Gly	Met	Gly	
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420

425

430

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Trp Ala Tyr Phe Ser Val Lys Ser Gly Gly Ile His Glu Phe Ser			
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TOP SECRET

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cca tat gct gaa gtt gag gtc atg aag atg tgc atg cct ctt tcc Pro Tyr Ala Glu Val Glu Val Met Lys Met Cys Met Pro Leu Leu Ser 705 710 715 720	2160
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gaa gtg gag tat tta ccg gaa aat tca tgc gat cct cgt gct gcc att Glu Val Glu Tyr Leu Pro Glu Asn Ser Cys Asp Pro Arg Ala Ala Ile 1845 1850 1855	5568
tcc gga act ctg gat gtt aat gga aag tgg ctg gga ggc att ttt gac Ser Gly Thr Leu Asp Val Asn Gly Lys Trp Leu Gly Gly Ile Phe Asp 1860 1865 1870	5616
aag gac agc ttt gtg gag aca cta gaa gga tgg gct aga aca gtt gtt Lys Asp Ser Phe Val Glu Thr Leu Glu Gly Trp Ala Arg Thr Val Val 1875 1880 1885	5664
aca gga agg gca aag ctt gga gga atc cct gtg gga att gtt gcg gtg Thr Gly Arg Ala Lys Leu Gly Gly Ile Pro Val Gly Ile Val Ala Val 1890 1895 1900	5712
gaa aca caa aca gtt atg caa ata ata cct gct gat cca ggt caa ctt Glu Thr Gln Thr Val Met Gln Ile Ile Pro Ala Asp Pro Gly Gln Leu 1905 1910 1915 1920	5760
gat tct cac gag agg gtt gtt cct caa gcc ggg cag gtg tgg ttt cct Asp Ser His Glu Arg Val Val Pro Gln Ala Gly Gln Val Trp Phe Pro 1925 1930 1935	5808
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gaa ctc cca ctt ttc att atc gca aac tgg aga ggc ttt tca ggt gga Glu Leu Pro Leu Phe Ile Ile Ala Asn Trp Arg Gly Phe Ser Gly Gly 1955 1960 1965	5904
caa agg gac ctt ttt gaa gga att ctt cag gct ggt tcg act att gtg Gln Arg Asp Leu Phe Glu Gly Ile Leu Gln Ala Gly Ser Thr Ile Val 1970 1975 1980	5952
gag aac ctt agg aca tac aaa cag ccc ata ttt gta tac att cca atg Glu Asn Leu Arg Thr Tyr Lys Gln Pro Ile Phe Val Tyr Ile Pro Met 1985 1990 1995 2000	6000
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aac tca gac cac att gaa atg tat gct gag cga acg gcc aaa ggt aac	6096

Asn Ser Asp His Ile Glu Met Tyr Ala Glu Arg Thr Ala Lys Gly Asn  
 2020 2025 2030

gtc ctt gag ccg gaa gga atg att gaa atc aaa ttt aga aca aca aga gaa 6144  
 Val Leu Glu Pro Glu Gly Met Ile Glu Ile Lys Phe Arg Thr Arg Glu  
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ttg ttg gag tgt atg aga aga ctt gat caa caa ttg att aat ttg aag 6192  
 Leu Leu Glu Cys Met Arg Arg Leu Asp Gln Gln Leu Ile Asn Leu Lys  
 2050 2055 2060

gaa aaa ctt tct gaa gcc aag agt aac aag gac tat ggt gca tat gat 6240  
 Glu Lys Leu Ser Glu Ala Lys Ser Asn Lys Asp Tyr Gly Ala Tyr Asp  
 2065 2070 2075 2080

tct ctg cag cag cag att aga ttc cgt gag aaa cag ctt ttg cct ttg 6288  
 Ser Leu Gln Gln Ile Arg Phe Arg Glu Lys Gln Leu Leu Pro Leu  
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tat act cag ata gct aca aaa ttt gct gaa ctc cat gat act tca tta 6336  
 Tyr Thr Gln Ile Ala Thr Lys Phe Ala Glu Leu His Asp Thr Ser Leu  
 2100 2105 2110

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 Arg Met Lys Ala Lys Gly Val Ile Arg Glu Val Leu Asp Trp Arg Lys  
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 Ser Arg Ser Val Phe Tyr Gln Arg Leu His Arg Arg Ile Gly Glu His  
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 Ser Leu Ile Asn Ile Val Arg Asp Ala Ala Gly Asp Gln Leu Ser Tyr  
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 Val Ser Ala Met Asn Leu Leu Lys Glu Trp Tyr Leu Asn Ser Asp Ile  
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 Asp Leu Gln Ala Leu Pro Gln Gly Leu Ala Ala Leu Leu Ser Lys Leu  
 2225 2230 2235 2240

gaa gca tca agt cgc gat aag ttg atc agt gaa ctt cgc aaa gta ctc 6768  
 Glu Ala Ser Ser Arg Asp Lys Leu Ile Ser Glu Leu Arg Lys Val Leu

2245

2250

2255

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 Gly

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 50 55 60  
 Thr Phe Gly Thr Glu Lys Ala Ile Leu Leu Val Ala Met Ala Thr Pro  
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 Glu Asp Met Arg Ile Asn Ala Glu His Ile Arg Ile Ala Asp Gln Phe  
 85 90 95  
 Val Glu Val Pro Gly Gly Thr Asn Asn Asn Tyr Ala Asn Val Gln  
 100 105 110  
 Leu Ile Leu Glu Ile Ala Glu Ile Thr His Val Asp Ala Val Trp Pro  
 115 120 125  
 Gly Trp Gly His Ala Ser Glu Asn Pro Glu Leu Pro Asp Ala Leu Lys  
 130 135 140  
 Ala Lys Gly Ile Val Phe Leu Gly Pro Pro Ala Ile Ser Met Ala Ala  
 145 150 155 160  
 Leu Gly Asp Lys Ile Gly Ser Ser Leu Ile Ala Gln Ala Ala Glu Val  
 165 170 175  
 Pro Thr Leu Pro Trp Ser Gly Ser His Val Lys Ile Pro Pro Glu Ser  
 180 185 190  
 Asp Leu Ile Thr Ile Pro Asp Glu Ile Tyr Arg Ala Ala Cys Val Tyr  
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 Thr Thr Glu Ala Ile Ala Ser Cys Gln Val Val Gly Tyr Pro Ala  
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 Met Ile Lys Ala Ser Trp Gly Gly Gly Lys Gly Ile Arg Lys Val  
 225 230 235 240  
 His Asn Asp Asp Glu Val Arg Ala Leu Phe Lys Gln Val Gln Gly Glu  
 245 250 255  
 Val Pro Gly Ser Pro Ile Phe Ile Met Lys Val Ala Ser Gln Ser Arg  
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 His Leu Glu Val Gln Leu Ile Cys Asp Gln His Gly Asn Phe Ala Ala  
 275 280 285  
 Leu His Ser Arg Asp Cys Ser Val Gln Arg Arg His Gln Lys Ile Ile  
 290 295 300

Glu Glu Gly Pro Ile Thr Val Ala Pro Pro Glu Thr Val Lys Glu Leu  
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 Glu Gln Ala Ala Arg Arg Leu Ala Lys Ser Val Asn Tyr Val Gly Ala  
 325 330 335  
 Ala Thr Val Glu Tyr Leu Tyr Ser Met Glu Thr Gly Glu Tyr Tyr Phe  
 340 345 350  
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 Ile Ala Glu Ile Asn Leu Pro Ala Ala Gln Val Ala Val Gly Met Gly  
 370 375 380  
 Ile Pro Leu Trp Gln Ile Pro Glu Ile Arg Arg Phe Tyr Gly Met Glu  
 385 390 395 400  
 His Gly Gly Asn Asp Gly Trp Lys Lys Thr Ser Val Leu Ala Thr  
 405 410 415  
 Pro Phe Asp Phe Asp Glu Ala Gln Ser Thr Lys Pro Lys Gly His Cys  
 420 425 430  
 Val Ala Val Arg Val Thr Ser Glu Asp Pro Asp Asp Gly Phe Thr Pro  
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 Thr Gly Gly Lys Val Gln Glu Leu Ser Phe Lys Ser Lys Pro Asn Val  
 450 455 460  
 Trp Ala Tyr Phe Ser Val Lys Ser Gly Gly Ile His Glu Phe Ser  
 465 470 475 480  
 Asp Ser Gln Phe Gly His Val Phe Ala Phe Gly Glu Ser Arg Ala Leu  
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 Glu Ile Arg Thr Asn Val Asp Tyr Thr Ile Asp Leu Leu Asn Ala Ser  
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 Ala Met Arg Val Arg Ala Glu Arg Pro Pro Trp Tyr Leu Ser Val Val  
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 595 600 605  
 Thr Ile Asp Met Val Arg Gly Gly Pro Gly Ser Tyr Lys Leu Lys Leu  
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 Gln Asn Asp Asp Asp Pro Ser Lys Leu Ile Gly Glu Thr Pro Cys Lys  
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 Pro Tyr Ala Glu Val Glu Val Met Lys Met Cys Met Pro Leu Leu Ser  
 705 710 715 720  
 Pro Ala Ser Gly Ile Ile His Phe Arg Met Ala Glu Gly Gln Ala Met  
 725 730 735  
 Gln Ala Gly Glu Leu Ile Ala Lys Leu Asp Leu Asp Asp Gly Ser Ala  
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 Val Arg Lys Ala Glu Pro Phe Thr Gly Ser Phe Pro Ile Leu Gly Pro

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Pro Thr Ala Ile Ser Gly Lys Val His Gln Lys Cys Ala Ala Ser Leu		
770	775	780
Asn Ala Ala Arg Met Ile Leu Ala Gly Tyr Glu His Asn Ile Asp Glu		
785	790	795
Val Val Val Lys Ser Leu Leu Asn Cys Leu Asp Ser Pro Glu Leu Pro		800
805	810	815
Phe Leu Gln Trp Gln Glu Cys Phe Ala Val Leu Ala Thr Arg Leu Pro		
820	825	830
Lys Asp Leu Arg Asn Glu Leu Glu Ala Lys Tyr Lys Glu Phe Glu Ile		
835	840	845
Ile Ser Ser Ser Gln Thr Ile Asp Phe Pro Ala Lys Leu Leu Lys Ala		
850	855	860
Ile Leu Glu Ala His Leu Ser Ser Cys Pro Glu Asn Glu Lys Gly Ala		
865	870	875
Leu Glu Arg Leu Val Glu Pro Leu Thr Ser Leu Val Lys Ser Tyr Glu		
885	890	895
Gly Gly Arg Glu Ser His Ala His Lys Ile Val Gln Ser Leu Phe Glu		
900	905	910
Glu Tyr Leu Ser Val Glu Glu Leu Phe Ser Asp Asn Ile Gln Ala Asp		
915	920	925
Val Ile Glu Arg Leu Arg Leu Gln Tyr Lys Lys Asp Leu Leu Lys Ile		
930	935	940
Val Asp Ile Val Leu Ser His Gln Gly Val Lys Ser Lys Asn Lys Leu		
945	950	955
Ile Leu Arg Leu Met Asp Lys Leu Val Tyr Pro Asn Pro Ala Ala Tyr		
965	970	975
Arg Asp Gln Leu Ile Arg Phe Ser Gln Leu Asn His Ile Val Tyr Ser		
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Glu Leu Ala Leu Lys Ala Ser Gln Leu Leu Glu Gln Thr Lys Leu Ser		
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Glu Leu Arg Ser Ser Ile Ala Arg Ser Leu Ser Glu Leu Glu Met Phe		
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Thr Glu Asp Gly Glu Asn Ile Asp Thr Pro Lys Arg Lys Ser Ala Ile		
1025	1030	1035
Asn Asp Arg Met Glu Asp Leu Val Ser Ala Pro Leu Ala Val Glu Asp		
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Ala Leu Val Gly Leu Phe Asp His Ser Asp His Thr Leu Gln Arg Arg		
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Val Val Glu Thr Tyr Ile Arg Arg Leu Tyr Gln Pro Tyr Leu Val Lys		
1075	1080	1085
Asp Ser Ile Arg Met Gln Trp His Arg Ser Gly Leu Ile Ala Thr Trp		
1090	1095	1100
Glu Phe Leu Glu Glu Tyr Val Glu Arg Lys Asn Gly Val Glu Asp Lys		
1105	1110	1115
Thr Leu Val Glu Lys His Ser Glu Lys Lys Trp Gly Val Met Val Val		
1125	1130	1135
Ile Lys Ser Leu Gln Phe Leu Pro Ala Ile Ile Ser Ala Ala Leu Arg		
1140	1145	1150
Glu Ala Thr Asn Asn Phe His Asp Pro Leu Lys Ser Gly Ser Gly Asp		
1155	1160	1165
Ser Ser Asn His Gly Asn Met Met His Ile Gly Leu Val Gly Ile Asn		
1170	1175	1180
Asn Gln Met Ser Leu Leu Gln Asp Ser Gly Asp Glu Asp Gln Ala Gln		
1185	1190	1195
Glu Arg Ile Asp Lys Leu Ala Lys Ile Leu Arg Glu Gln Glu Ile Gly		1200
1205	1210	1215

Ser Ile Ile His Ala Ala Gly Val Gly Asp Ile Ser Cys Ile Ile Gln  
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 Arg Asp Glu Gly Arg Ala Pro Met Arg His Ser Phe His Trp Ser Ser  
 1235 1240 1245  
 Glu Lys Leu Tyr Tyr Val Glu Glu Pro Leu Leu Leu His Leu Glu Pro  
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 Ile Arg Tyr Thr Pro Ser Arg Asp Arg Gln Trp His Leu Tyr Thr Val  
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 His Lys Val Val Tyr Ser Ser Val Thr Val Lys Gly Pro Leu His Gly  
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Ile	Asp	Thr	Ile
Val	Gly	Lys	Glu
1700	1705	1710	
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Leu	Ser	Gly	Ser
Gly	Ala	Ile	Ala
1715	1720	1725	
Ala	Tyr	Lys	Glu
Thr	Phe	Thr	Leu
Thr	Tyr	Val	Thr
Gly	Arg	Gly	Arg
Thr	Val	Thr	Val
1730	1735	1740	
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Ala	Tyr	Leu	Arg
Leu	Gly	Met	Arg
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Leu	Asp	Gln	Pro
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Gly	Phe	Ser	Ala
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His	Met	Gln	Leu
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His	Leu	Thr	Val
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Trp	Leu	Ser	Tyr
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Lys	Pro	Leu	Asp
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Val	Glu	Thr	Leu
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Thr	Gly	Arg	Ala
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Val	Met	Gln	Ile
Ile	Ile	Pro	Asp
1905	1910	1915	1920
Asp	Ser	His	Glu
Arg	Val	Val	Pro
Gln	Ala	Gly	Gln
Val	Trp	Phe	Pro
1925	1930	1935	
Asp	Ser	Ala	Thr
Lys	Thr	Ala	Gln
Ala	Ile	Leu	Asp
1940	1945	1950	
Glu	Leu	Pro	Leu
Phe	Ile	Ile	Asn
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Phe	Glu	Ile	Leu
Gly	Ile	Gln	Ala
1970	1975	1980	
Glu	Asn	Leu	Arg
Arg	Thr	Tyr	Lys
Gln	Pro	Ile	Trp
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Met	Gly	Glu	Leu
Arg	Gly	Gly	Ala
Gly	Ala	Trp	Val
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Asn	Ser	Asp	His
Ile	Glu	Met	Tyr
Ala	Glu	Arg	Thr
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&lt;223&gt; representative construct (3' end)

&lt;400&gt; 12

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46